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FOOD NEWS

FOR CONSUMERS

United States Department of Agriculture

Volume 2 Number 1

Winter 1985



Plugging into Food Data

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FOOD NEWS

FOR CONSUMERS

Winter 1985
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PERSPECTIVES



Dear Readers:

President Reagan has proclaimed April 22-28, 1985, as "National Consumers Week." The 1985 slogan, "Consumers Should Know," has two messages: that consumers have a right to fair treatment in the marketplace and that they also have a responsibility to educate themselves.

During National Consumers Week, businesses, educators and government agencies through-

out America will focus on helping consumers become better informed. Special events will be held in shopping malls, community centers, and schools. Watch for notices of programs and events in newspapers, on radio, and on television.

This issue of "Food News For Consumers" also contains information "consumers should know" — from marketplace tools, such as food labels and hotlines — to the wealth of information from local government agencies like health departments, county extension offices, and libraries.

New in this issue is a Consumer's Almanac. This section will let you know of upcoming special observances, such as "National Nutrition Month" in March, so that you can take advantage of awareness programs conducted by various groups to help you become better informed — and to make your needs known.

We hope this issue will serve as a directory of information you — and your readers — should know. Please use the addresses and telephone numbers provided with each article if you want to know more about a particular event or program.

As always, please let us know how we can help you.

Sincerely,

Ann Collins Chadwick

ANN COLLINS CHADWICK, Director
Office of the Consumer Advisor

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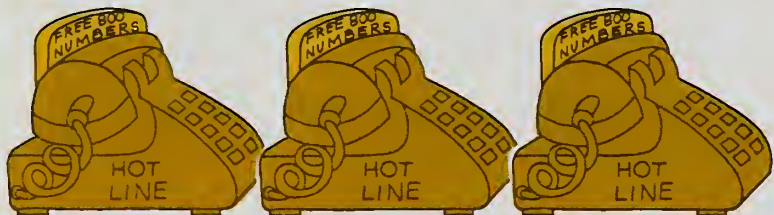
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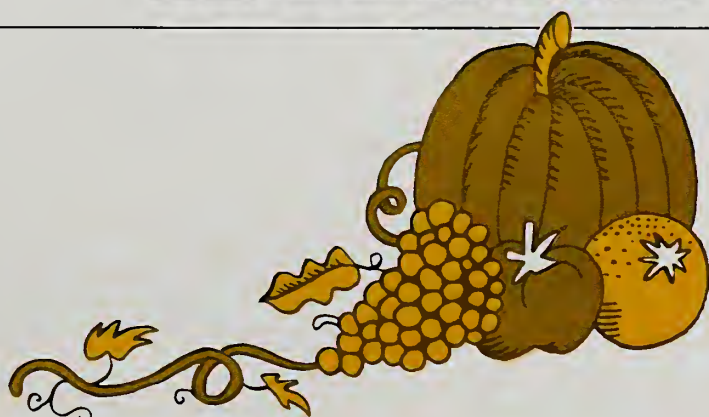
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CONSUMER EDUCATION

"Sweet Sandwich" – A Milder, More Storable Onion

Unlike other onions, a new onion called "Sweet Sandwich" becomes milder in flavor when stored at lower temperatures. And it has a long shelf life.

U.S. Department of Agriculture scientists bred the new onion specifically to be grown in the northeastern United States — where longer summer days give it the sunlight it needs.

The scientists found that "Sweet Sandwich" brought together many desirable taste and storage traits of several varieties of "Early Yellow Globe" onions. Unlike its pungent parents, however, the new hybrid's mild flavor guarantees consumer appeal.

"Sweet Sandwich" should not be confused with western-grown "Sweet Spanish," a mild salad and sandwich onion that varies distinctly in color and uniform mildness. The bulbs of the "Sweet Sandwich," however, are equally mild when picked and improve in flavor as storage time increases.

The researchers also found that after four months of storage "Sweet Sandwich" bulbs were slightly softened, but had no sprouting, root growth or disease.

Even under hot and dry growing conditions in the East in 1983, tests throughout New York state showed the new onion's superiority. The onion, in fact, outproduced 15 other varieties in commercial production; and more than 90 percent of the bulbs attained two- to three-inch diameters. Moreover, the bulbs were strikingly uniform in shape and attractiveness.

One important note for gourmets

who savor onions: Only a limited amount of "Sweet Sandwich" onion seed was available for the 1984 growing season, so it will be at least another year before production catches up with demand.

For more information, contact: Dr. Clinton E. Peterson, Oats, Vegetable, and Forage Research, Agricultural Research Service, U.S. Department of Agriculture, Madison, Wisc. 53706; telephone: (608) 262-1830.

"AG in the Classroom"

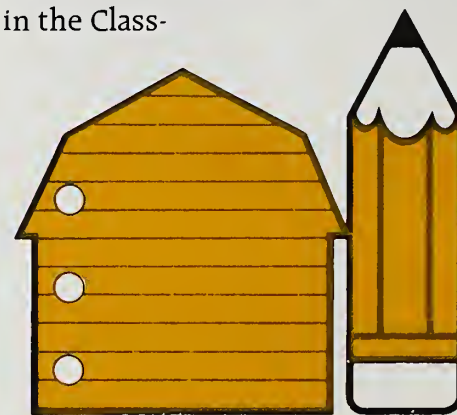
Many schoolchildren often do not have the opportunity to learn how agriculture affects them. "Ag in the Classroom," a program designed to help students in Kindergarten through Grade 12 understand agriculture, is changing this. The U.S. Department of Agriculture sponsors "Ag in the Classroom" and serves as coordinator and advisor to 34 participating states. Each

state, however, is responsible for developing its own program.

State programs provide educational tools such as printed materials, exhibits, videotapes, computer programs, farm tours and special agricultural fairs. These tools explain the importance of agriculture and, more importantly, how it affects the nation's youth now and in the future.

"Ag in the Classroom" — which includes teacher training — is meant to be integrated with, not supplement, existing classroom curricula.

For more information, contact: Dr. Peggy Hart, Director, Ag in the Class-



Secretary John Block explores how agriculture affects our daily lives with fourth-grade group at Pt. Pleasant Elementary, Glen Burnie, MD.

room, Room 227-W, U.S. Department of Agriculture, Washington, D.C. 20250; telephone: (202) 447-5727.

For Food Editors Only

The U.S. Department of Agriculture's nutrition awareness campaign is now in full swing and a variety of information materials are available to food editors and writers. Known as **Make Your Food Dollars Count**, the campaign helps low-income consumers — especially food stamp users — in buying and preparing more nutritious, less expensive food.

In workshops last summer, nutritionists, dietitians and officials from county extension offices, food stamp offices and state departments of health received information on meal plans and food buying tips for use in nutrition awareness work with low-income households.

Nutrition and shopping pamphlets — in English and Spanish — are being distributed to state and county welfare agencies. The pamphlets cover such topics as comparing brands, checking unit pricing and reading food labels. In addition, posters, radio public service announcements, work-

shops and slide/tape presentations are getting the nutrition message directly to low-income consumers.

For more information on **Make Your Food Dollars Count**, food editors and writers may contact: Office of Information, Food and Nutrition Service, U.S. Department of Agriculture, 3101 Park Center Dr., Alexandria, Va. 22302; telephone: (703) 756-3286. Note: Black and white camera-ready clip-art of nutrition and shopping messages — in English and Spanish — is also available.



FOOD SAFETY

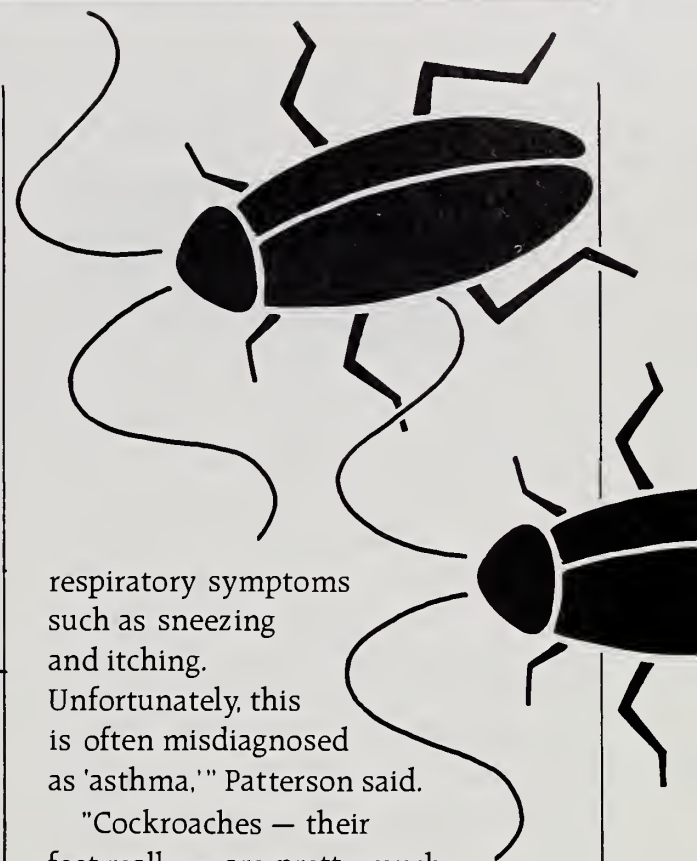
New Chemical Spray Cuts Cockroach Births

Hydroprene, a chemical safe for humans and household pets, will soon be available for use in cockroach control.

Richard Patterson, a U.S. Department of Agriculture entomologist in Gainesville, Fla., explains how the birth control chemical works and why cockroach control is important.

"Hydroprene locks roaches into a state of sexual immaturity," said Patterson. "When sprayed as young insects, the males suffer damaged wings, making it impossible for them to attract a mate with their courtship dance. When young females are sprayed, their reproductive ability is curtailed in that they may mate, but the eggs won't hatch."

"Disease-carrying roaches can cause serious problems. They may carry food poisoning bacteria, viruses, intestinal parasites, and molds and fungi that cause food spoilage. Some people are also allergic to cockroaches and at high infestation levels suffer upper-



respiratory symptoms such as sneezing and itching.

Unfortunately, this is often misdiagnosed as 'asthma,'" Patterson said.

"Cockroaches — their feet really — are pretty much like blotting paper. They pick up and track in whatever's in the environment. They also carry things on their body surfaces and in the digestive tract.

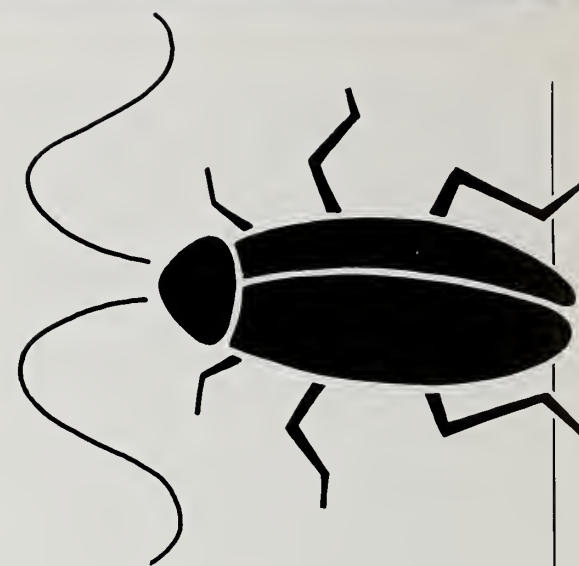
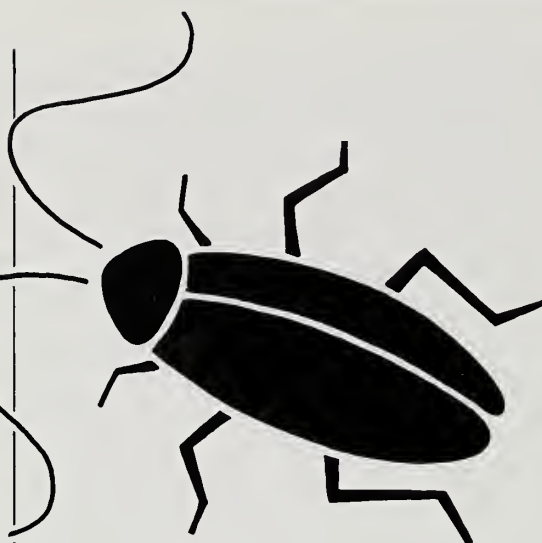
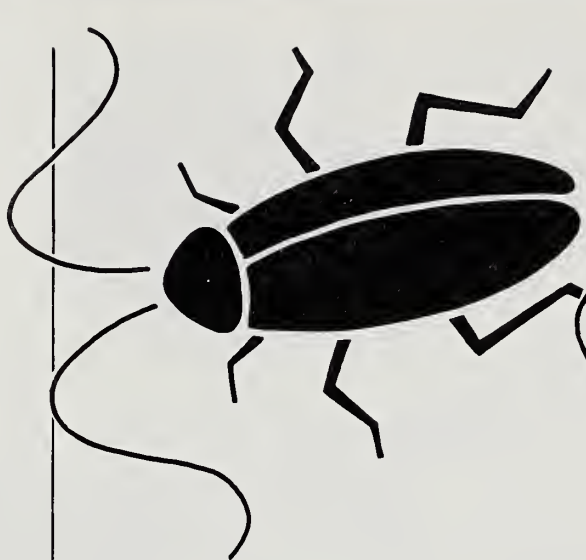
"What makes cockroaches a serious problem is that there are so many of them," he continued. "They're our number-one household pest, and in North America we have six major species — the German, American, Smoky-brown, Australian, Oriental and Brown Banded."

When something slithers across the cabinet top, how can you tell what it is? "What you think of as a 'cockroach,'" Patterson explains, "is probably either a German or Brown Banded insect. These bugs often infest homes and restaurants. The American, Smoky-brown, Australian and Oriental roaches are larger, darker types. Most people would think they're 'water bugs.'"

With all these roaches around, some of them disease-carriers, it sounds like we should all be grateful for the development of hydroprene. Patterson agrees. "Hydroprene will help control roaches in places where conventional sprays haven't worked well — large apartment complexes, warehouses, and military installations," he said.

Why? "Even under the best condi-





tions, roach control is not a one-shot proposition. After spraying, some roaches pick up only sub-lethal doses; others manage to avoid contact with sprayed surfaces," he said. To complicate matters, many roach species develop resistance to insecticides over several generations.

"A one-two punch to overcome such problems can be built into existing roach sprays by combining them with hydroprene," Patterson said. "The regular sprays can be used to score heavy kills that bring the population down to an acceptable level. Hydroprene then works over the next six or seven months to curb the birthrate."

In one trial that Patterson carried out, a 100-unit public housing complex was initially sprayed with a regular spray and hydroprene mixture. Monthly applications of the regular spray were then continued for the following 7 months. At the end of the test period, the roach population in the complex had been reduced by 95 percent. "And we think," Patterson said, "that the 5 percent roach infestation remaining was probably 'new' roaches carried in by tenants on grocery bags."

For more information, contact: Richard S. Patterson, Insects Affecting Man and Animals Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, Gainesville, Fla. 32604; telephone: (904) 374-5901; or Jim Eye, Microbiology Division, Food Microbiology Branch, Entomology/Ex-

traneous Materials Section, U.S. Department of Agriculture, Bldg. 322 BARC-East, Beltsville, Md. 20705; telephone: (301) 344-4014.

Q & A: Handling Easter Eggs and Ham

Easter, like other holidays, has its own festive foods. Children are thrilled with decorative eggs and other goodies in their Easter baskets. Grownups prefer the savory ham dinner with tasty trimmings. These foods, like those served year-round, require safe handling to prevent food

poisoning. The rules are simple — keep cold food cold, hot food hot and all food clean.

Callers to USDA's Meat and Poultry Hotline frequently ask about the preparation and handling of hard-cooked eggs and ham.

Q: Are hard-cooked eggs used for an Easter egg hunt safe to eat?

A: Yes, but they must be handled properly because hard-cooked eggs are perishable. First, cool hard-cooked eggs in cold water immediately after cooking, and then refrigerate them so they cool all the way through. If any eggs crack while cooking, do not use them for the hunt since bacteria can



easily get through the openings and contaminate the eggs. In addition, hard-cooked eggs should not be out of the refrigerator for more than two hours — a time span to keep in mind when you plan the hiding and hunting of Easter eggs.

Q: How long will hard-cooked eggs keep in the refrigerator?

A: Hard-cooked eggs in the shell should be used within one week. Those with cracked shells or eggs with the shell removed should be used within one day.

Q: Is there any danger of trichinosis in hams?

A: There is no danger of trichinosis in fully cooked hams. They are specially processed in accordance with the U.S. Department of Agriculture's guidelines to kill trichinae organisms. These hams are ready to eat without further cooking.

Fresh hams, however, need extra care in preparation. Thorough cooking of fresh ham — until the center reaches a temperature of 170°F. — will kill trichinae parasites — the cause of trichinosis. To make sure this temperature is reached, insert a meat thermometer in the thickest part of the cut, not touching the bone or fat. Trichinosis, while rare in the United States, can be serious.

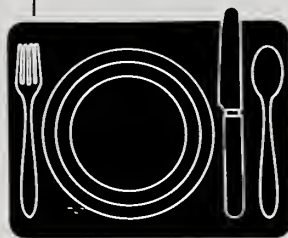
Q: How long can ham be safely refrigerated?

A: Uncured ham or fresh pork will keep in the refrigerator from 3 to 5 days. It will keep in the freezer from 4 to 8 months.

Cured ham will keep in the refrigerator for one week. Leftover cooked ham that is tightly wrapped and refrigerated 1 to 2 hours after cooking will keep 4 to 5 days. Both uncooked and leftover ham can be kept in the freezer up to two months before losing flavor and texture.

For answers to your questions on hard-cooked eggs, ham and other meat and poultry products, contact USDA's Meat and Poultry Hotline, (202) 472-4482. The hotline hours are from 8:00 a.m. until 4:30 p.m. Monday

through Friday. If you call after hours or on weekends, leave your name and number and someone will return your call.



HEALTH AND NUTRITION

You CAN Overdose on Mega-Vitamins

Too much of some vitamins and minerals can be as harmful to human health as too little, say U.S. Department of Agriculture nutritionists.

"Your body needs only so much of each nutrient — sometimes only a trace," said Dr. Helene N. Guttman, associate director of USDA's Human Nutrition Research Center at Beltsville, Md.

"Too many Americans believe that if one of something is good, then two or three must be better. Overdoses of certain vitamins can make you seriously ill, and many vitamins and minerals have to be ingested in proper balance with one another. Buying too many vitamin supplements can also be hard on the pocketbook."

"The initials 'RDA' on food packages and vitamin bottles stand for 'Recommended Dietary Allowance,' and they mean what they say," Dr. Guttman said. "Once you have 100 percent of what you need and you self-prescribe many times more of a nutrient, you force your metabolism to work overtime to rebalance. Some people are successful in this rebalancing act; others are not."

Dr. Guttman said an elderly neighbor was suffering from memory lapses while taking large supplements of several so-called "anti-stress" vitamins. "She feared becoming senile," she said, "but when she cut back on the vitamins to no more than the RDA for each, her memory improved in a

few days. She is an example of a person whose metabolism could not rebalance when confronted with excessive trace nutrients."

Dr. Guttman said self-administered overdosing with folic acid, another supplement available at the vitamin counter, can also cause problems. "If you take huge doses of folic acid to cure a vitamin B₁₂-associated anemia, you can cause real trouble for yourself," Dr. Guttman said.

"There are several types of vitamin-deficiency anemias," she said. "Some are caused by an insufficient amount of vitamin B₁₂ and others by insufficient folic acid. The folic acid mobilizes the vitamin B₁₂ present in the liver and causes a temporary remission of symptoms so that you don't notice your mistake right away."

"But then the liver runs out of vitamin B₁₂ to contribute, and there is a terrible relapse. Even worse, vitamin B₁₂ is scavenged from the nervous system and you can end up with something worse — a vitamin B₁₂-deficiency problem of the nervous system called 'combined system disease.'"

Guttman said the surest way to a nutritionally adequate diet for most adults is to eat balanced meals containing a variety of food. "It's good to be an adventurous diner," she said. "That way you won't get bored, and meals become — and remain — a pleasant experience."

According to Dr. James G. Smith, Jr. — chief of USDA's Vitamin and Minerals Nutrition Laboratory and a colleague of Dr. Guttman's — minerals that must be ingested in proper balance are iron, zinc and copper.

"Recent research," Dr. Smith said, "leaves no doubt that pregnant women and lactating mothers require supplements of iron and zinc. But we find too much iron inhibits the body's absorption of zinc, and too much zinc, in turn, can interfere with the body's copper metabolism."

Upsetting the body's intake of copper can be particularly important since

(Continued on page 12)

SPECIAL FEATURE

Plugging into Food Data

Already you hear people calling this "The Age of Information," and it does seem a shame, with so much information available, that anyone should be shut out.

Yet that can happen if people don't know how to access what's available.

Borrowing this year's National Consumers Week (April 22-28) theme, "Consumers Should Know," we're taking this opportunity to list a number of consumer information sources on nutrition, food safety and smart shopping.

Perhaps the question is "How can I cut down on salt?" or "Do you really save money buying the large economy sizes?"

This article should make clear that, far from being "hard-to-find," the answers to these and many other food questions can be as close as the telephone, a local organization or on food labels. In most cases, consumers can get the information they need with only a little effort.

Quick Information by Phone

Telephone services and hotlines provide the quickest and easiest resource for consumers with food-related questions. Here are some telephone numbers that every consumer should know.

USDA's Meat and Poultry Hotline — (202) 472-4482 — is the number to call with questions about the safety, wholesomeness or labeling of meat and poultry products. Although the hotline is not toll-free, a staff member will take your name and number and call you right back, so cost is held to a minimum. The hotline is staffed Monday through Friday, 8 a.m. to 4:30 p.m. (EST). For calls after normal working hours, leave your name and number on the answering machine and your call will be returned the next working day.

Hearing-impaired persons with access to TDD (Telecommunications Device for the Deaf) equipment, can call the hotline on (202) 447-3333.



USDA's Food Distribution Hotline — (703) 756-FOOD — can refer you to local free food distribution centers. Workers at the center will tell you if you are eligible to receive surplus food distributed by USDA.

Food and Drug Administration's Office of Consumer Affairs — (202) 443-3170 — provides answers to questions on the safety and labeling of food products other than meat and poultry.

USDA's Human Nutrition Information Service — (301) 436-8474 — has information on overall health and nutrition.

National Marine Fisheries Service — (202) 634-7458 — This agency within the U.S. Department of Commerce can answer questions on fish and fish products.

Federal Trade Commission — (202) 376-8617 — has information for consumers on food advertising.

(When in doubt, call the Federal Information Center. Their information staff can recommend a federal agency to help you with almost any question. Check your telephone directory under U.S. Government.)

The **Cancer Hotline** — (800) 4-CANCER — puts you in touch with the American Cancer Society, which can answer many of your questions on cancer. This group also distributes publications on request.

Dial-a-dietitian — a service of the American Dietetic Association — may be available in your community. Check your local phone book. Dial-a-dietitian is a volunteer service, operated by certified nutritionists and dietitians, to answer consumers' food-related questions. These volunteers also give tips on preparing, handling and storing food. If this service is not available in your area, a dietitian in a local hospital might be a good source. A local health clinic may also have, or be able to direct you to, a nutritionist.



Number for Toll-Free Numbers — (800) 555-1212 — can provide the telephone number of any organization with a toll-free number. For example, if you have a question about the proper preparation or storage of corned beef, the food company that processed the product just might have a number you can call for help.

Community Resources

If you explore a bit, you can probably find many rich resources right in your own backyard. For instance, **health and professional organizations**, such as the American Dietetic Association, the American Heart Association, the American Home Economics Association, the American Association of Retired Persons and the American Red Cross often sponsor workshops on food-related topics. Right now, the American Red Cross, in conjunction with USDA, is offering a nationwide "Better Eating for Better Health" workshop, which covers everything from fad diets to food labeling. Call your local chapter for more details.

The **Cooperative Extension Service** office in your county may have pamphlets and offer classes on food preparation, purchasing, storage and handling. During the harvest season, for example, the Extension Service can help nonfarm families find "pick-your-own" farms, where fresh fruits and vegetables are available at a savings. Many consumers take this opportunity to gather fruits and vegetables for home canning. Home canning publications are also available from your local extension agent. The phone number can be found under federal, state or county listings.

Local health departments frequently offer classes and health fairs on nutrition and other topics. They also handle food poisoning cases and monitor the sanitation of restaurants and food stores.

Local libraries — often overlooked these days as a resource — have a wealth of books and magazines to help you learn more about food, in-

cluding information on agricultural production and the nutritional significance of certain foods. Check with the reference librarian.

Food Stamp offices have programs like "Make Your Food Dollars Count," which provide free nutrition and food cost publications to food stamp recipients.

Schools and universities with home economics, human nutrition and health departments may be able to put you in touch with a faculty member willing to answer your food question.

Government Publications

Many government agencies offer free or low-cost publications on food safety, nutrition and other food-related topics.

The Consumer Information Center, Pueblo, Colo. 81009, distributes publications for a number of government agencies. Write to that address for their catalogue which lists, for example:

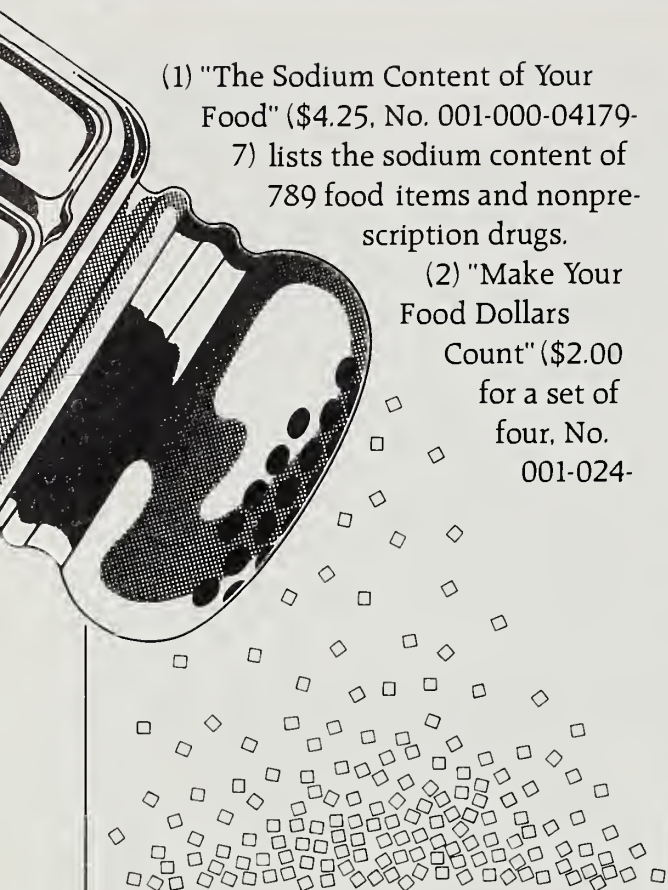
(1) "The Safe Food Book" — full of information on food spoilage, food poisoning bacteria, kitchen sanitation and how to care for foods that require special handling.

(2) "Talking About Turkey" — step-by-step information on turkeys, from selecting a bird, to cooking it, to storing leftovers.

(3) "Sodium — Think About It" — a guide for the person who wants to limit sodium intake. The pamphlet gives ranges of sodium content for various foods and provides helpful tips for reducing sodium when selecting foods at the supermarket, preparing meals at home or eating out.

(4) The "Consumer's Resource Handbook" — a list of organizations to assist consumers with complaints.

The U.S. Government Printing Office also provides food, health and nutrition publications for consumers. Write to U.S. Government Printing Office, Washington, D.C. 20402, or phone (202) 783-3238, for any of the publications listed below or for a free publications catalogue.



(1) "The Sodium Content of Your Food" (\$4.25, No. 001-000-04179-7) lists the sodium content of 789 food items and nonprescription drugs.

(2) "Make Your Food Dollars Count" (\$2.00 for a set of four, No. 001-024-

00215-1) provides information on comparing product brands, finding the best meat buys, understanding food labels, checking unit prices and more.

(3) "Let's Cook Fish" (\$2.75, No. 003-020-0053-3) covers the buying, storing and preparing of seafood.

(4) "Vegetables in Family Meals" (\$3.75, No. 001-000-04150-9) provides tips on the buying, preparing and storing of vegetables.

Trade and Professional Associations and Public Interest Groups

Trade and professional associations, and public interest groups provide invaluable help for the consumer who wants to know. A phone call or letter can plug you into their vast resources.

Food industry trade associations generally have a wealth of information — including publications — on food products they represent. Here's a short list of some major trade groups and the information they offer consumers:

United Fresh Fruit and Vegetable Association
727 N. Washington Street
Alexandria, Virginia 22313
Phone: (703) 836-3410

Helps consumers with information on buying and storing fresh fruits and vegetables.

National Dairy Council
6300 N. River Road
Rosemont, Illinois 60018
Phone: (312) 696-1020

Provides consumers with general

A Closer Look at Meat and Poultry Food Labels

One resource that consumers always have at hand is the label on a food product. Here's how to check a few specifics before you buy.

Check the **product name** and **illustration**. This will tell you exactly what you're buying. The U.S. Department of Agriculture has strict rules on how much meat and poultry must be in items using certain names. For example, "Beef with Gravy" must contain at least 50 percent cooked beef, while "Gravy with Beef" is required to have only 35 percent cooked beef.

The picture on a label strongly influences buyers, so it must be honest. If the label shows five slices of beef, at least five must be inside. And when a picture shows fancy extras that are not part of the product, such as cranberry sauce or lemon slices, they must be identified as "suggested servings."

The **list of ingredients** must appear on the label. They are listed in

order by weight, with the main ingredient listed first. Spices and natural flavorings can be listed as a group — "spices" or "flavorings." But preservatives and artificial flavorings or colors must each be named.

The **net weight** — in pounds or fluid ounces — must also be shown on the container or package. The net weight includes any liquid in a canned product, so shaking sometimes can give you a clue to how much solid food a package contains.

Nutrition labeling is not required for many items. Nonetheless, it is becoming more prevalent. And it is mandatory for products making a nutrition-related claim. If an item says "only 300 calories," for example, it must prove its value to dieters. To do that, the label lists the calories, protein, carbohydrates and fat in a single serving.

Some meat and poultry producers may include a chart showing what percent of the U.S. Recommended Daily Allowances for protein and certain vitamins and minerals you get in a single serving. The label also must show how many servings are in the

container.

Open dating, which is optional for processors, indicates product freshness and serves as a guide to safe storage times. It includes the "sell by" date on fresh meat and poultry — the last day the product should be for sale; the "use by" date on products such as hot dogs and luncheon meats — how long a product retains top eating quality; and the "pack" date on canned foods — the day the product was packaged. Should you need help interpreting a date code, ask the store manager.

Handling instructions — like "Keep Frozen" or "Refrigerate" — must appear on all perishable meat and poultry products. Paying attention to instructions like these can readily prevent problems for consumers.

The **processing company's name** and **address** must appear on all meat and poultry products. This is the company consumers should contact with any problems or questions. Many products also have a **lot** or **batch number** that tells on what day and on what shift they were produced. If these products are recalled,

nutrition information on a variety of foods, including dairy products.

National Live Stock and Meat Board
444 North Michigan Avenue
Chicago, Illinois 60611
Phone: (312) 467-5520

Makes available information on how to buy, store and cook meat products.

National Broiler Council
1155 Fifteenth Street, N.W.
Washington, D.C. 20005
Phone: (202) 296-2622

Gives consumers tips on how to cut, debone and cook poultry.

Wheat Industry Council
1333 H Street, N.W.
Suite 1200
Washington, D.C. 20005
Phone: (202) 682-2130

Provides information on the role of wheat foods in the diet.

Public interest groups are an often overlooked source of information for the average consumer. Next time you're wondering about food safety, nutrition or labeling, consider the following:

Community Nutrition Institute
2001 S Street, N.W.
Suite 530
Washington, D.C. 20009
Phone: (202) 462-4700

Specializes in food and nutrition issues, including hunger, food quality and safety, nutrition research, food programs, education, food labeling and marketing.

Public Voice for Food and Health Policy

1001 Connecticut Avenue, N.W.
Suite 522
Washington, D.C. 20036
Phone: (202) 659-5930

Conducts food and health research; educates consumers on food economics, food hazards, health and nutrition.

Center for Science in the Public Interest
1501 16th Street, N.W.
Washington, D.C. 20036
Phone: (202) 332-9110

Works on food and nutrition problems at the national level. Monitors federal agencies that oversee food safety, labeling, nutrition, advertising and trade.

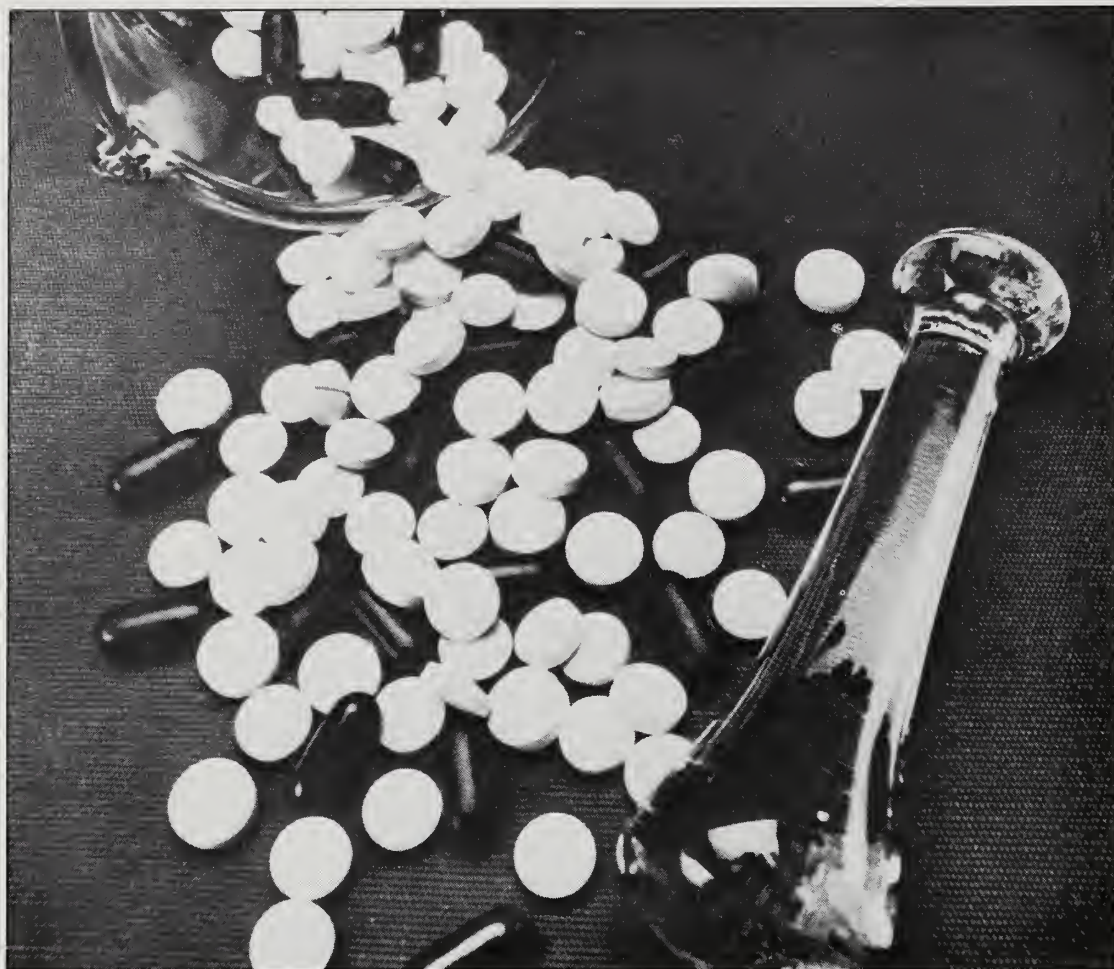
the numbers identify bad or "problem" lots.

Unit pricing is not part of a food label, of course, but it should not be ignored by consumers. Often posted under products on the grocery shelves, unit pricing allows shoppers to select the most economical package size or brand of food.

To calculate the unit price when it is not posted, simply divide the price by the number of units it contains — ounces, pints, numerical count. For some foods, there may be little or no difference between the cost per ounce for large or small containers. However, an ounce of ready-to-eat cereal in an individual pack may cost twice as much as an ounce in an 18-ounce package.

For more information on labeling and content, consumers can order free of charge the pamphlets "Meat and Poultry Labels Wrap It Up" and "Meat and Poultry Products — A Consumer Guide to Content and Labeling Requirements" from: FSIS Publications Office, Rm. 1163 South, U.S. Department of Agriculture, Washington, D.C. 20250.





Mega-Vitamins

Continued from page 7

the average American diet tends to contain too little copper.

Potassium and sodium also have to be kept in balance, Dr. Smith said. Many adult Americans are apt to get more sodium and less potassium than they need.

"USDA researchers found during a recent one-year study that blood pressure in men was lowest when their potassium intake was higher," he said.

Dr. Smith said research on the functions of many minerals in human nutrition is far from complete. He said recent studies show chromium may alleviate symptoms of both hyperglycemia and hypoglycemia — too much and too little sugar in the blood. USDA scientists at Beltsville, Md., have found that most people have a marginal intake of chromium.

Rather than taking pills, what can you eat that is high in chromium?

"Cereal products, nuts and mushrooms," said Dr. Smith. "Black pepper and brewer's yeast are also relatively high in organic chromium, but the

usual diet contains little of these. There may be special cases where measured supplements of specific minerals, such as chromium, are necessary. These supplements, however, should be taken only under medical supervision because large doses of chromium can cause dangerous side reactions."

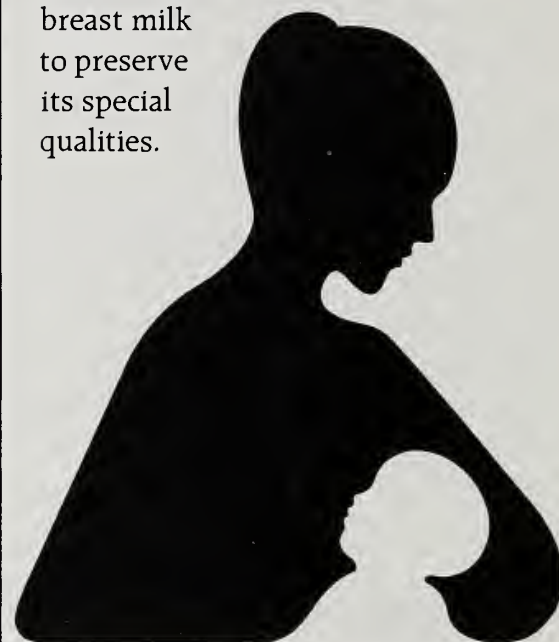
Dr. Smith said USDA scientists recently found the increased popularity of running and other forms of strenuous exercise may increase dietary needs for chromium and zinc. "There is an increased excretion of those two minerals among people who exercise regularly and hard," he said.

Guttman, Smith and their USDA colleagues study ways to define human requirements for essential nutrients and the metabolic role of nutrients, alone and in combination with other substances.

For more information, contact: Dr. Helene N. Guttman, Agricultural Research Service, U.S. Department of Agriculture, Rm. 223, Bldg. 308 BARC-East, Beltsville, Md. 20705; telephone: (301) 344-1790.

How to Freeze Mother's Milk

Researchers studying the composition of breast milk have uncovered a previously unsuspected storage problem that reinforces the need for careful home handling and storage of breast milk to preserve its special qualities.



Art from the "Healthy Mothers, Healthy Babies Coalition," a broad-based government and private group which aids new mothers.

Many a nursing mother manually expresses or mechanically pumps breast milk for her infant's use when she spends a night out or a day at the office. Most doctors advise refrigerating the milk if it will be used within 24 hours. If the milk will not be used in that time, it should be frozen — but only for a maximum of two to four weeks.

All too often, nursing mothers freeze the breast milk in the handiest place — the freezer door. Unfortunately, this is also the warmest place. To assure their babies receive full benefits from their breast milk, mothers should store the milk in the back of the freezer. This avoids the possibility of freeze-thaw cycles due to frequent openings and closings of the door.

The researchers learned that normal freezer temperatures may not be adequate for long-term freezing of breast milk. Lipase, a vital enzyme present in human milk but not in most other milk, breaks down fat molecules so they can be used by the

baby for energy, growth, development and other functions.

Lipase normally is activated by bile salts in the baby's stomach. The study results suggest that lipase action in breast milk also may be stimulated by freezing and thawing and by extended storage at normal freezer temperatures.

For nursing mothers, this research underscores the need to freeze breast milk at the back of the freezer, and for no longer than two to four weeks.

The only way breakdown of fat molecules can be avoided is to freeze the milk to -94°F (-70°C) or lower, which is beyond the capacity of home freezers. This is not necessary for short-term, home storage but does become important in long-term storage of breast milk for hospitalized premature babies or infants who will undergo surgery. In such cases, the hospital usually has access to a freezer with low enough temperatures to halt the breakdown of fat particles.

For more information on the storage aspect of the breast milk research, contact: Joel Bitman, Agricultural Research Center, U.S. Department of Agriculture, Beltsville, Md. 20705; telephone: (301) 344-2476 or (301) 344-2330. Also see: *Journal of Pediatric Gastroenterology and Nutrition* (quarterly issue 3, 1983). For more detail on the composition research and its significance for premature infants, see *Pediatric Research* (December 1983).



LOOKING AHEAD

Pollen Hormone Grows Bumper Crops

Applying infinitesimal amounts of the hormone brassinolide — a steroid

found in rape pollen — to young fruits and vegetables speeds up their growth and maturation by as much as two to four weeks.

U.S. Department of Agriculture researchers found that just one billionth of one gram of brassinolide caused plant cells to divide and elongate more rapidly. Tiny amounts of the chemical, for example, increased

potato yields by over 24 percent, radish and lettuce yields by 15 to 30 percent, and bean and pepper yields by 6 to 7 percent.

"All parts of the plants grew more quickly and matured earlier," said USDA scientist Werner Meudt. "It was as if the hands of nature's clock spun faster."

However, it took a team of scien-



One potato, two potatoes — crop sprayed with brassinolide (left) out-produced the non-sprayed (right).

tists three years and 500 pounds of rape pollen to obtain 15 milligrams of brassinolide — equal in weight to a few grains of salt. Rape is a forage crop that is also used to produce oil seeds.

Since the hormone hastens maturity by three to four weeks when sprayed on leaves of very young plants, it offers the potential for double-cropping — harvesting two crops in one growing season — with less worry about late-season weather damage. In addition, the hormone seems to help plants use nutrients more efficiently, which could help cut fertilizer needs.

Apparently, brassinolide — or related sterol compounds — are present in plants universally. All living cells need steroids to fill physiological structural and functional roles.

Brassinolide looks promising as a growth stimulant, but isolation of the natural chemical would be too expensive for commercial use. Therefore, USDA scientist Malcolm Thompson and a research team developed a method to combine several compounds similar to brassinolide into compounds called brassinosteroids. Initial tests indicate brassinosteroids might be just as effective as natural brassinolide, but far less expensive to produce.

The scientists currently are studying brassinosteroids to find out how and why they speed up plant growth and increase crop yield.

Once commercial companies develop large-scale methods for making brassinosteroids, the new compound could become a standard tool for more efficient crop management.

For further information, contact: Dr. Werner Meudt, Plant Hormone Laboratory, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md. 20705; telephone: (301) 344-3636.

Don't Drop the Soybeans

Researchers with the U.S. Department of Agriculture are using high-

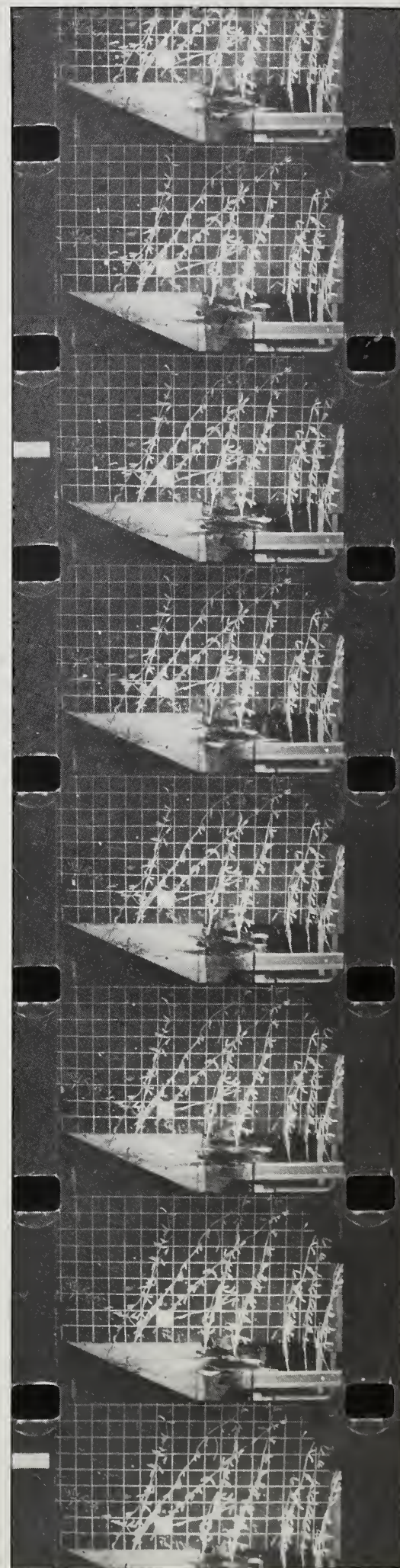
speed movies to study a new harvesting technique that could reduce by half the soybeans lost using traditional harvesting methods — and at the same time, reap some \$246 million in annual savings for farmers.

Last year, about four percent of the 1.6 billion bushel soybean crop was lost. Researchers are trying to trim the loss to two percent with the use of a new combine that "airlifts" soybeans so more can be harvested. The combine presently used has V-shaped teeth on the sickle bars that cut the soybean stalk by moving back and forth rapidly. But, unlike other small grain crops harvested by this traditional combine, soybeans have large pods that grow along the entire stalk. When jarred or shaken, the pods shatter and the beans fall to the ground.

The laboratory harvester mock-up that researchers are testing has three rotary discs, each measuring 13.5 inches in diameter. The disks are slightly curved and have knives hinged to the edges. Stalks of dry soybeans, like those normally harvested in rows on a carriage bed, are driven between the disks at three simulated speeds. The whirling disks cut the stalks and help float the beans that break free. The airlift — created both by the shape of the disks and their 170 miles per hour speed — keeps a higher percentage of beans aloft long enough to be harvested.

Researchers have made hundreds of films of the new cutting technique and can document what happens by "freezing" the film in split-second images. They use shutter speeds of 500 frames a second to track the trajectory of plants entering the harvester. They then speed the filming to 5,000 frames a second to capture loose beans in the air and to "freeze" the movement or acceleration of plant stalks as they are cut.

For more information, contact: John Hummel, Soybean Breeding and Production Research, Agricultural Research Service, U.S. Department of Agriculture, Urbana, Ill. 61801; telephone: (217) 333-6459.



Freeze-frame photo show how USDA re-fined harvester blade-action so that more beans are gathered up. This could save soybean farmers millions.

The Consumer's Almanac

The story goes that farmers used to find the almanac so useful they would nail it to the barn wall. This list of events, too, covering the next 3 months, is designed for saving.

Event	Theme	Contact
National Cherry Month Feb. 1-28	The many uses of cherries	Berle Peterson National Red Cherry Institute Grand Rapids, MI (616) 454-6196
Potato Lover's Month Feb. 1-28	"Potato Lovers Make Good Sports" — the potato as a fitness food	Rhonda Purwin Ketchum Public Relations San Francisco, CA (415) 781-9480
National Kraut and Frankfurter Week Feb. 14-23	Why kraut and frankfurters are a natural "couple"	William R. Moore National Kraut Packers Association St. Charles, IL (312) 584-8950
National Nutrition Month Mar. 1-31	Food for health	Ann Franczak The American Dietetic Association Chicago, IL (312) 280-5015
National Peanut Month Mar. 1-31	Peanuts and peanut recipes	Melanie Miller National Peanut Council and State Growers Association Washington, DC (202) 775-0450
National Bake Week Mar. 17-23	"Dinner at Grandma's" — a bakebook of old-time, luscious recipes is available	Michelle Katzin Jasculca/Terman & Associates Chicago, IL (312) 337-7400
Egg Salad Week Apr. 8-14	The many ways to use those "After-Easter" eggs	Kay Engelhardt American Egg Board Park Ridge, IL (312) 296-7043
National Consumers Week Apr. 22-28	"Consumers Should Know" — programs and events will emphasize the consumer's right to fair treatment in the marketplace and their responsibility for self-education.	U.S. Office of Consumer Affairs The White House Washington, DC (202) 634-4330

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